

ABSTRACT OF THE DISCLOSURE

A method and processor system that substantially enhances the store gathering capabilities of a store queue entry to enable gathering of a maximum number of proximate-in-time store operations before the entry is selected for dispatch. A counter is provided for each entry to track a time since a last gather to the entry. When a new gather does not occur before the counter reaches a threshold saturation point, the entry is signaled ready for dispatch. By defining an optimum threshold saturation point before the counter expires, sufficient time is provided for the entry to gather a proximate-in-time store operation. The entry may be deemed eligible for selection when certain conditions occur, including the entry becoming full, issuance of a barrier operation, and saturation of the counter. The use of the counter increases the ability of a store queue entry to complete gathering of enough store operations to update an entire cache line before that entry is dispatched to an RC machine.